

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A polymeric compound, comprising: composed of
linear polymer chains selected from the group consisting of polyethyleneimine
chains and polyvinylamine chains, the linear polymer chains being crosslinked together
via linking groups and having the general formula



wherein in which R is a hydrocarbon group[[.]] and X is a group having at least one
heteroatom, ~~where the linear polymer chains are crosslinked together via linking groups~~
wherein less than 30% of the heteroatoms are connected to linking groups and
remaining heteroatoms are capable of undergoing further derivatizations.

2. (Currently Amended) The polymeric compound of ~~as claimed~~ claim 1, ~~characterized in~~
~~that it~~ wherein the polymeric compound is a substantially insoluble, swellable resin.

3. (Currently Amended) The polymeric compound of ~~as claimed~~ claim 1, ~~characterized in~~
~~that~~ wherein the linking groups crosslink the linear polymer chains via their heteroatoms.

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4. (Currently Amended) The polymeric compound of as claimed claim 1, characterized in that wherein ~~only some, preferably less than 30%, more preferably less than 15%, in particular about 12%,~~ of the heteroatoms are connected to linking groups, and ~~most of the~~ remaining heteroatoms are capable of undergoing further ~~available for further~~ derivatizations.

5. (Currently Amended) The polymeric compound of as claimed claim 1, characterized in that wherein R is an alkyl group, ~~preferably a C₄-C₆-alkyl group, in particular a linear alkyl group.~~

6. (Currently Amended) The polymeric compound of as claimed claim 1, characterized in ~~that it~~ wherein R is an ethylene group.

7. (Currently Amended) The polymeric compound of as claimed claim 1, characterized in that wherein X is selected from the group consisting of NH, N-R¹, CH-NH₂, CH-OH[[,]] and CH-R²-OH, ~~in particular NH, in which~~

wherein R¹ and R² are selected from the group consisting of alkyl, cycloalkyl, aryl and benzyl.

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8. (Currently Amended) The polymeric compound ~~of as claimed~~ claim 1, characterized in that wherein X is selected from the group consisting of $N^+-R^1R^2$, O, S, $CH-R^2-NH_2$, $CH-SH[[,]]$ and $CH-R^2-SH$,

wherein ~~in which~~ R^1 and R^2 are selected from the group consisting of alkyl, cycloalkyl, aryl and benzyl.

9. (Currently Amended) The polymeric compound ~~of as claimed~~ claim 7, characterized in that wherein R^2 is a C_1-C_6 -alkyl group, ~~preferably a methylene group.~~

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) The polymeric compound ~~of as claimed~~ claim 1, characterized in that wherein the linking groups are derived from at least one compound selected from the group consisting of polyaldehydes, activated polycarboxylic acids, isocyanates, isothiocyanates, dihalides, epoxides, ketenes and epichlorohydrin.

13. (Currently Amended) The polymeric compound ~~of as claimed~~ claim 12, characterized in that ~~it~~ wherein the linking groups are derived from at least one polyaldehyde, ~~preferably from at least one aromatic polyaldehyde.~~

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14. (Currently Amended) The polymeric compound of ~~as claimed~~ claim 1, characterized in ~~that it~~ wherein the linking groups are derived from a dialdehyde, ~~preferably from an aromatic dialdehyde, in particular from terephthalaldehyde.~~

15. (Currently Amended) The polymeric compound of ~~as claimed~~ claim 1, characterized in ~~that it~~ wherein the polymeric compound is composed of linear polyethyleneimine crosslinked with terephthalaldehyde.

16. (Currently Amended) The polymeric compound of ~~as claimed in~~ claim 12, characterized ~~in that~~ wherein the linking groups are derived from at least one dihalide, preferably from a dihalide of the group 1,4-dibromomethylbenzene, 1,4-dichloromethylbenzene, 1,6-dibromo(dichloro)hexane, and 1,7-dibromo(dichloro)heptane.

17. (Currently Amended) The polymeric compound ~~as claimed in~~ of claim 1, characterized ~~in that it~~ wherein the polymeric compound has a loading with amino functionalities of about 10 to about 25 mmol/g, ~~preferably about 15 mmol/g.~~

18. (Currently Amended) The polymeric compound of ~~as claimed~~ claim 1, characterized in ~~that it~~ wherein the polymeric compound is in the form of resin micropellets.

19. (Withdrawn) The use of a polymeric compound as claimed in claim 1 for solid phase synthesis.

20. (Withdrawn) The use as claimed in claim 19 for synthesizing peptides and proteins.
21. (Withdrawn) The use as claimed in claim 19 for synthesizing heterocycles.
22. (Withdrawn) The use of a polymeric compound as claimed in claim 1 for polymer-assisted synthesis in solution.
23. (Withdrawn) The use as claimed in claim 22 for preparing polymeric reagents.
24. (Withdrawn) The use as claimed in claim 22 for preparing an ion exchanger.
25. (Withdrawn) The use of a polymeric compound as claimed in claim 1 for immobilizing enzymes.
26. (Withdrawn) The use of a polymeric compound as claimed in claim 1 for immobilizing substrates which are converted with an enzyme.
27. (Withdrawn) The use of a polymeric compound as claimed in claim 1 as carrier for pharmacological active ingredients.
28. (Withdrawn) The use of a polymeric compound as claimed in claim 1 for inducing an immune response.

29. (Withdrawn) The use of a polymeric compound as claimed in claim 1 as scavenger of electrophiles, in particular of acid chlorides and isocyanates.

30. (Withdrawn) A method for solid phase synthesis, characterized in that a polymeric compound as claimed in claim 1 is provided with a suitable linker, and then the compound to be synthesized is assembled stepwise on this linker.

31. (New) The polymeric compound of claim 4, wherein about 12%, of the heteroatoms are connected to linking groups, and remaining heteroatoms are capable of undergoing further derivatizations.

31. (New) The polymeric compound of claim 1, wherein R is a C₁-C₆-alkyl group.

32. (New) The polymeric compound of claim 1, wherein R is a linear alkyl group.

33. (New) The polymeric compound of claim 7, wherein X is NH.

34. (New) The polymeric compound of claim 7, wherein R² is a methylene group.

35. (New) The polymeric compound of claim 12, wherein the linking groups are derived from at least one aromatic polyaldehyde.

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36. (New) The polymeric compound of claim 11, wherein the linking groups are derived from an aromatic dialdehyde.

37. (New) The polymeric compound of claim 1, wherein the linking groups are derived from an terephthalaldehyde.

38. (New) The polymeric compound of claim 1, wherein the polymeric compound has a loading with amino functionalities of about 15 mmol/g.